

# **Walter Reed National Military Medical Center (Bethesda)**

## **Improvement Opportunities for Philanthropy**

### **Epidaurus Project Conference USUHS**

**October 9, 2009**



**Building A**

**Building B**

**West Elevation**

# Overview

- Mission of WRNMMC
- Overall project
- Campus Plan
- Hospital complex/ Wayfinding
- Pt Rooms
- Wards
- Outpatient clinics
- Lobbies and Common Areas
- Gardens and Outside
- Patient experience

Disclaimer:

**Information changes.**  
Feel free to interrupt.

# Missions of WRNMMC

- NMMC and potential **NMC** of the United States (VA, NIH, USUHS)
- Tertiary care, teaching hospital (medical school, residency, fellowship)
- Premier research center
- Warrior care (esp. TBI/PTSD/amputee)
- “Our nations leaders” Incl. POTUS)
- “World-class” aspirations

# Medicine in the United States: The IOM Reports (2001)

- 25% of patients report life-changing harm from health encounters
- 100,000 dead per year (mostly from medical errors)
- Unsustainable expense
- 50 million uninsured, more underinsured
- **A BROKEN SYSTEM.**

# What are the Fixes ? (IOM Reports)

- I. Integrated Care
- II. Patient and Family Centered Care (PFCC)

# The Dream 2001

- Build this future in the Military Health System—
- --including buildings, care processes, and research—
- --and make it a model for the rest of America.

# Epidaurus Project I- Bioethics and Administration (2001-3)

- Capt Fred Foote, USN
- Ed Pellegrino, M.D.  
(Head, President's Council on Bioethics)
- Roger Bulger, M.D. (Pres. IOM; NIH)
- Eric Cassell, M.D. (Cornell Univ.)
- VADM Jim Zimble (USUHS)
- Ken Shine (IOM, RAND)
- David Leach (ACGME)
- Jay Gershen (Univ. Colorado)
- John Porretto (Univ. Texas)
- Barbara Mittelman (NIH)



# Epidaurus Project Participants

## USUHS Conferences, 2003, 2006, 2009

K. Hamilton (TX A&M)  
Wayne Ruga (England)  
Y. August (PA)  
S. Verderber  
(Clemson)  
S. Frampton  
(Planetree)  
Roger Ulrich (TX A&M)  
Capt. Fred Foote (USN)

R. Guenther (Green)  
B. Huelat (Healing)  
A. Ridenour (Arts)  
D. Kamp (Gardens)  
R. Pentecost (AIA)  
C. Zimring (EBD)  
B. Komiske (Healing  
Environments)  
D. Levin (CHD)  
R. Mayer (Rothschild)  
P. Nebenzahl  
(Philanthropy)

# 2005: The BRAC Opportunity

- Vision of a world class primary and tertiary centers embodying latest in healing design
- Walter Reed National Military Medical Center (WRNMMC)
- A beacon for our nation
- Opportunity to embody Epidaurus concepts
- Partnership with other DoD Projects on Evidence-Based Design (TMA (Boenecke, Zimring, Malone), Army HFPA (Bond))

# 2007-08-- Successes

- Broad acceptance of healing design principles throughout the MHS
- Augmented program of capital investment
- Inclusion of healing features in NCA BRAC designs
  - Single patient rooms
  - Facilities to support family involvement
  - Ultra clean air; light; noise control
  - Ergonomics for healthy workplace
  - Green design
  - Nature and other positive distractions
  - NICOE TBI Center- model facility
- ***Buildings that are platforms for advanced processes of care***

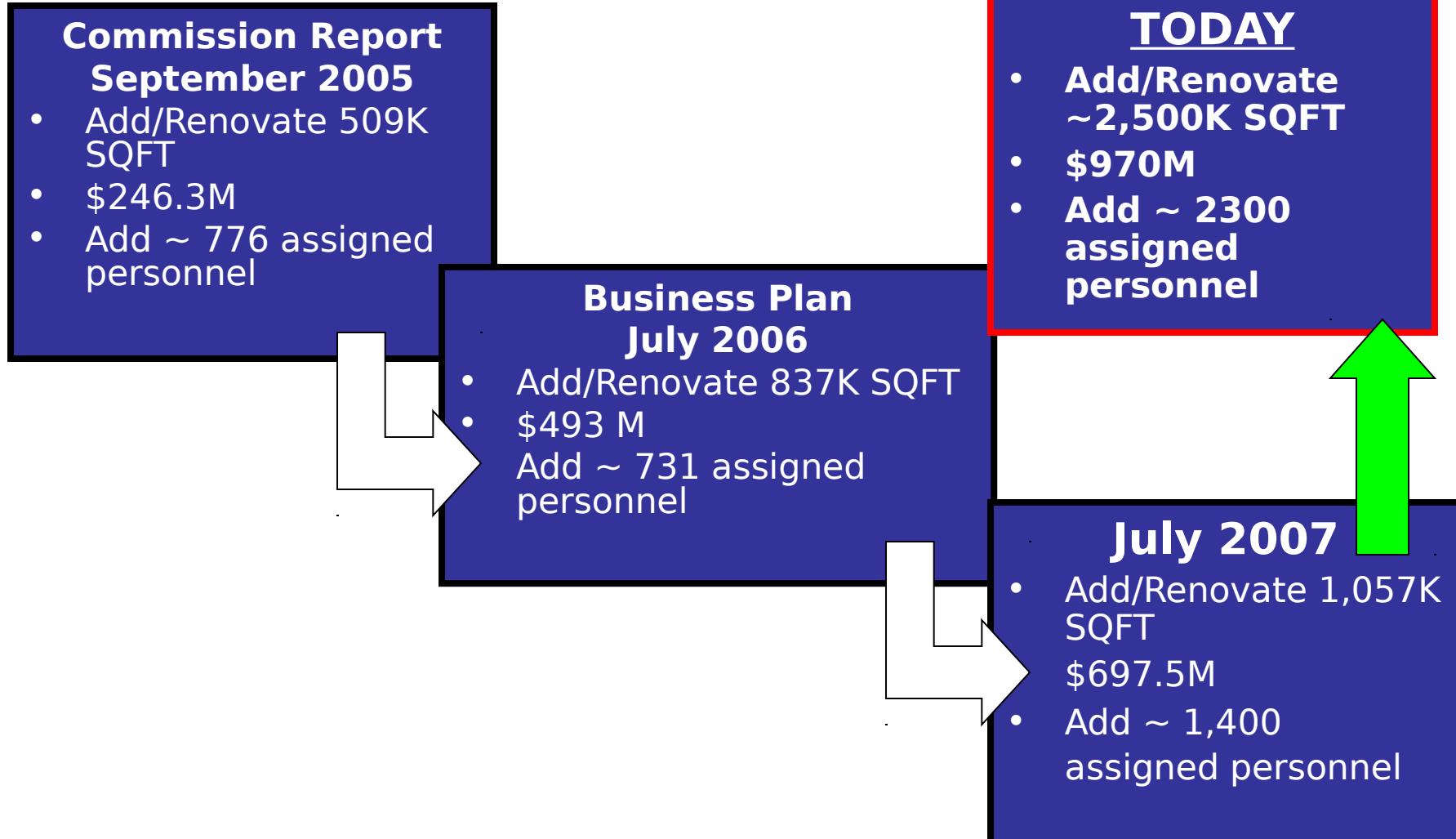
# Fort Belvoir Community Hospital: Front View Facing East



# 6 Challenges for Bethesda BRAC

- Work with old buildings
- Limited and UNPREDICTABLE funding
- Short time line (6 yrs)
- Limited staff
- Challenge of “going Joint”
- Political issues
  - Army/Navy
  - Campus (NNMC/NMNCA/JFT/USUHS/NAVFAC)

# BRAC Program Evolution- WRNMMC

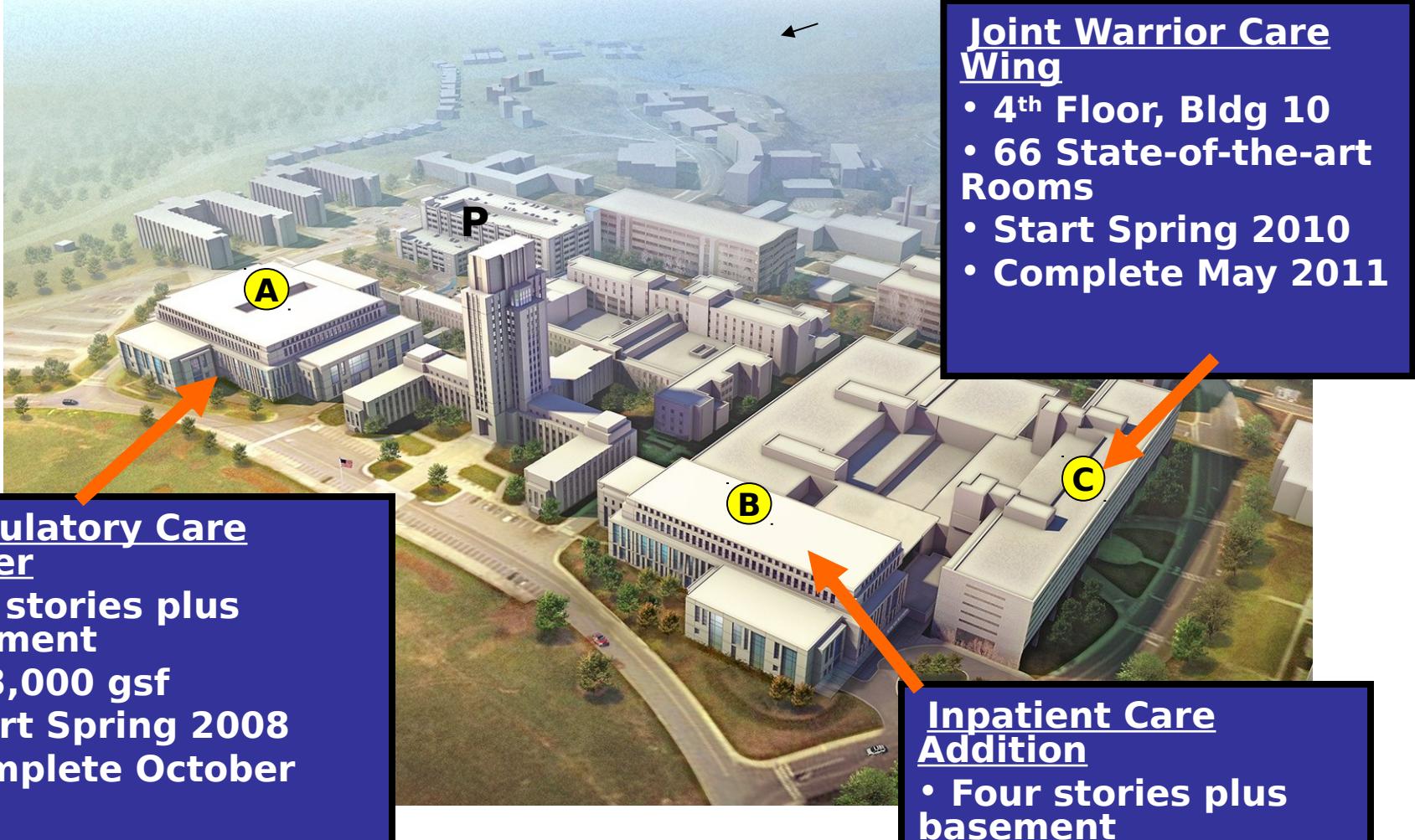


# Proposed Medical Additions



# Aerial View - Medical Center

## WRNMMC Bethesda



# PROPOSED NNMIC CONFIGURATION

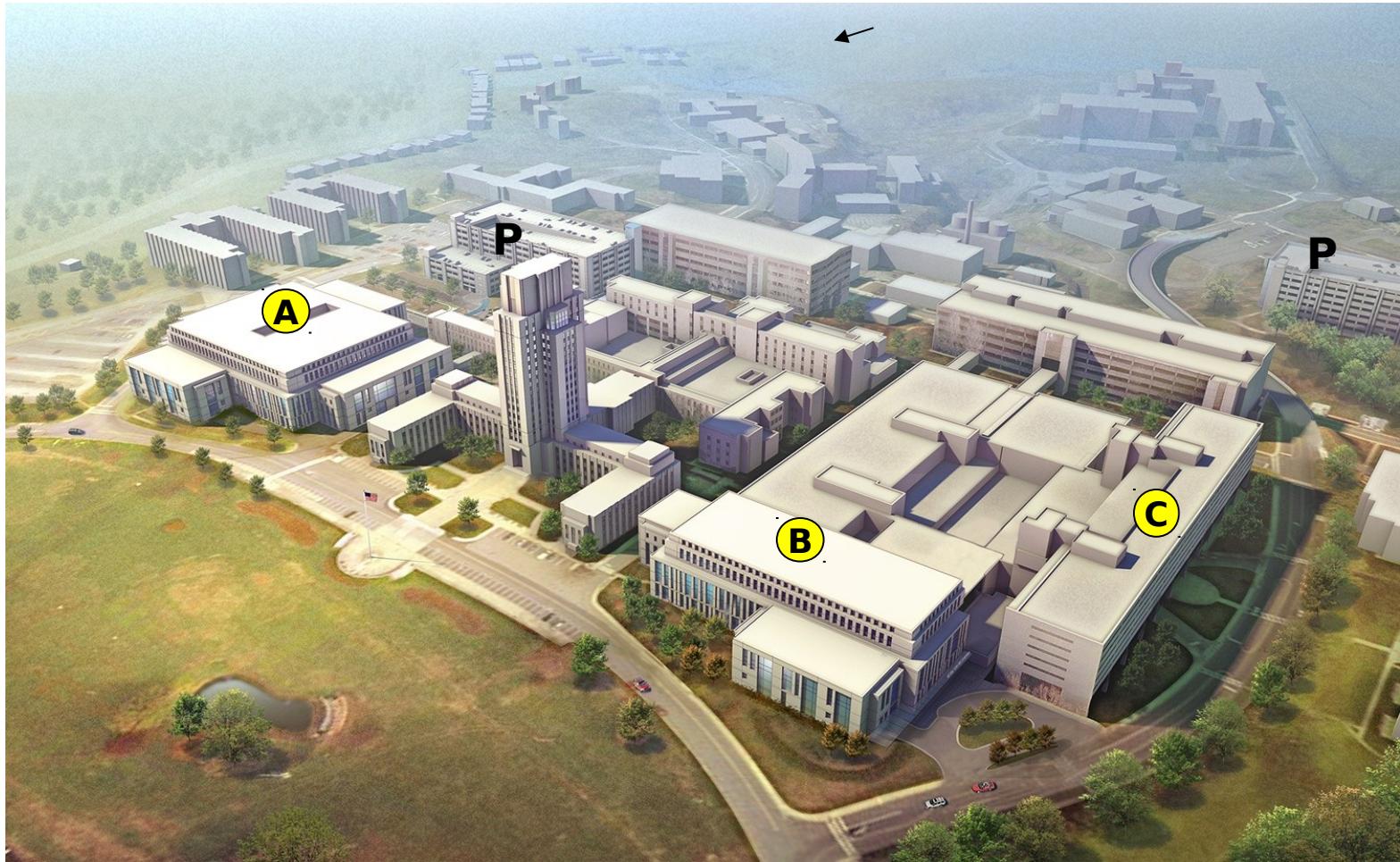


# Wayfinding, order, and distances

- At least 50 Buildings randomly numbered
- Hospital itself is 10 buildings with confusing pattern
- New outpatient building (BLDG A) is in the wrong place
- Possibly prohibitive walking distances

# Aerial View - Medical Center

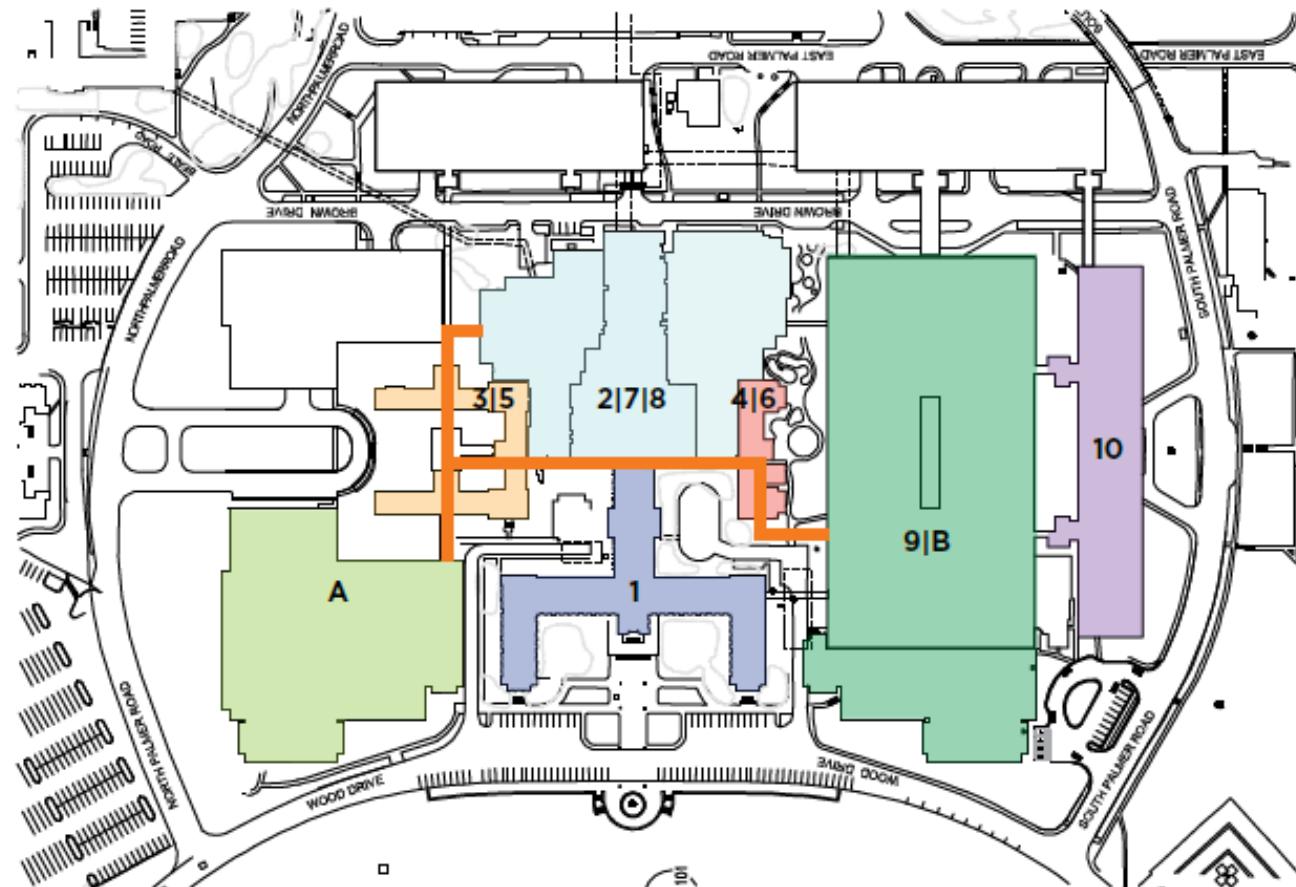
## WRNMMC Bethesda



# What is to be done?

- Moving walkways?
- Make virtue of horizontality  
(attractions, beautiful façade, nature)
- WAYFINDING SCHEME

WAYFINDING THEME APPROACH  
WAYFINDING AND SIGNAGE



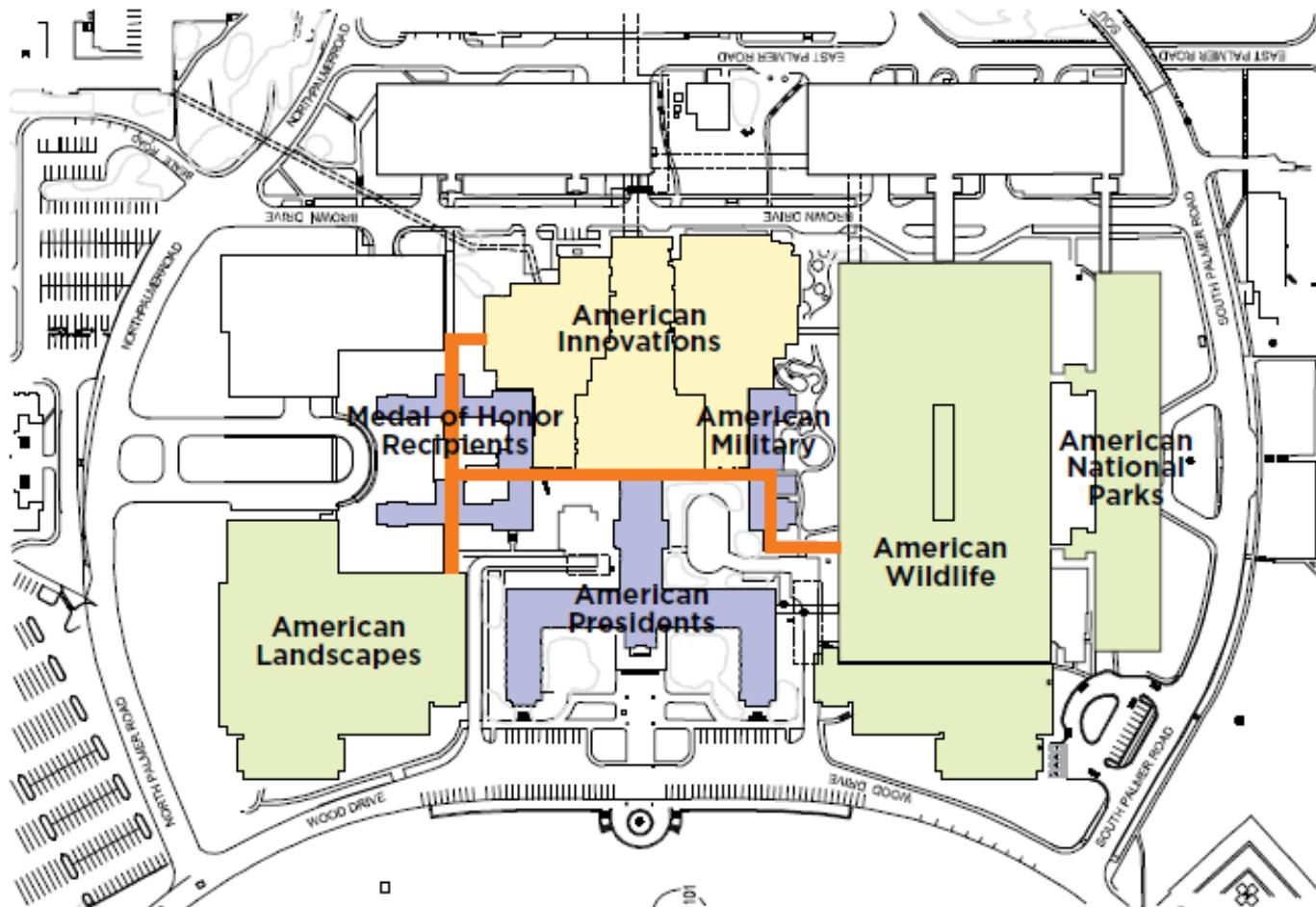
**Wayfinding Zone Plan with Building Combinations**

Implementing a zoning plan provides the opportunity to blend areas and create a more easily understood wayfinding system.

Buildings 2+7 would become one zone. similarly, Buildings 9+B, 3+5 and 4+6 would become combined into single zones. Each of these building sets have the appearance of being one building. By combining them, there will be a quantity of seven zones instead of twelve buildings, resulting in a less complex wayfinding system.

Zone transition nodes are indicated by the red circles.

WAYFINDING THEME APPROACH  
ZONE NOMENCLATURE OPTION ONE



**American Nature and Military Heritage Theme**

A nature theme would be applied to buildings that have a high concentration of patient/visitor use. The zone names would include American Landscapes, American Wildlife and American National Parks.

The buildings with primarily administrative areas would be given zone names related to military heritage. These theme topics would include American Presidents, American Military and Congressional Medal of Honor recipients.

Buildings 2/7/8 are a mixed use group of buildings that house "Main Street", patient areas as well as administrative areas. The use of a nature theme is not critical, so we propose a theme that celebrates the American People and their Innovations and Accomplishments. Future Interpretive displays would include Inventions, discoveries and Innovations from electricity, space travel, music, science, architecture, technology and the arts.

In this option, the zone is identified, then layered with a zone interpretive topic which changes from level to level, making this approach more complex than a typical zone system. The next page illustrates a matrix of potential interpretive topics.

# PATIENT ROOMS

# Inpatient Units



## Inpatient Room

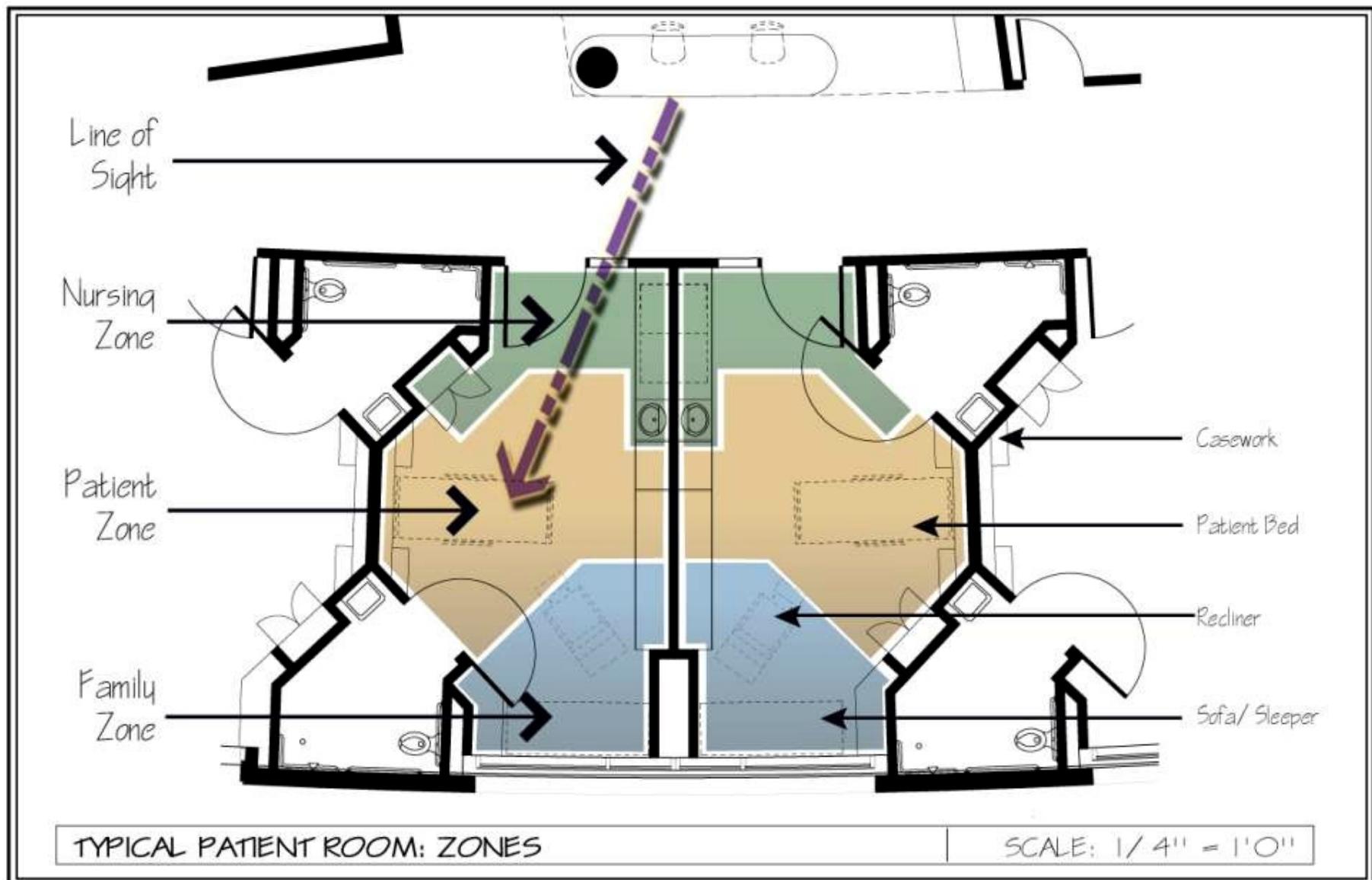
- Three zones: staff, patient, family
- Large window with either east or west views
- Interior design focus on sink
- Flexible furnishings
- Bathroom on the headwall



## Unit Support Elements

- Multidisciplinary work rooms with half-height glazing to support visual connections
- Distributed staff support and work space

# Acute Care Room Schematic



# WRNMMC: ICU

50 New ICU Beds, 100% Negative Pressure

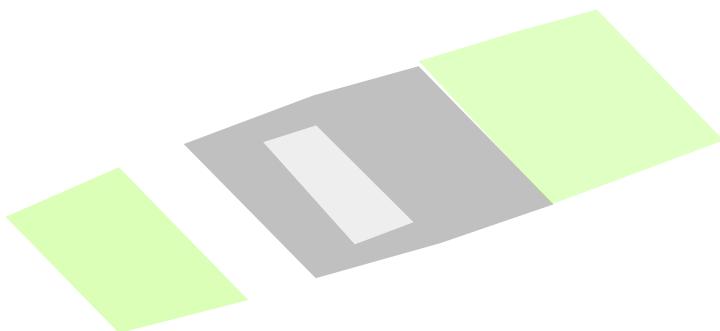
- **Improved Patient Quality of Care and Safety**
- **Isolation Protocols at all Patient Rooms**
- **HVAC**
  - **Negative and Positive Pressure Rooms**
  - **HEPA filters**
  - **100% Outside Air**

# WRNMMC: BLDG 10 Patient Rooms

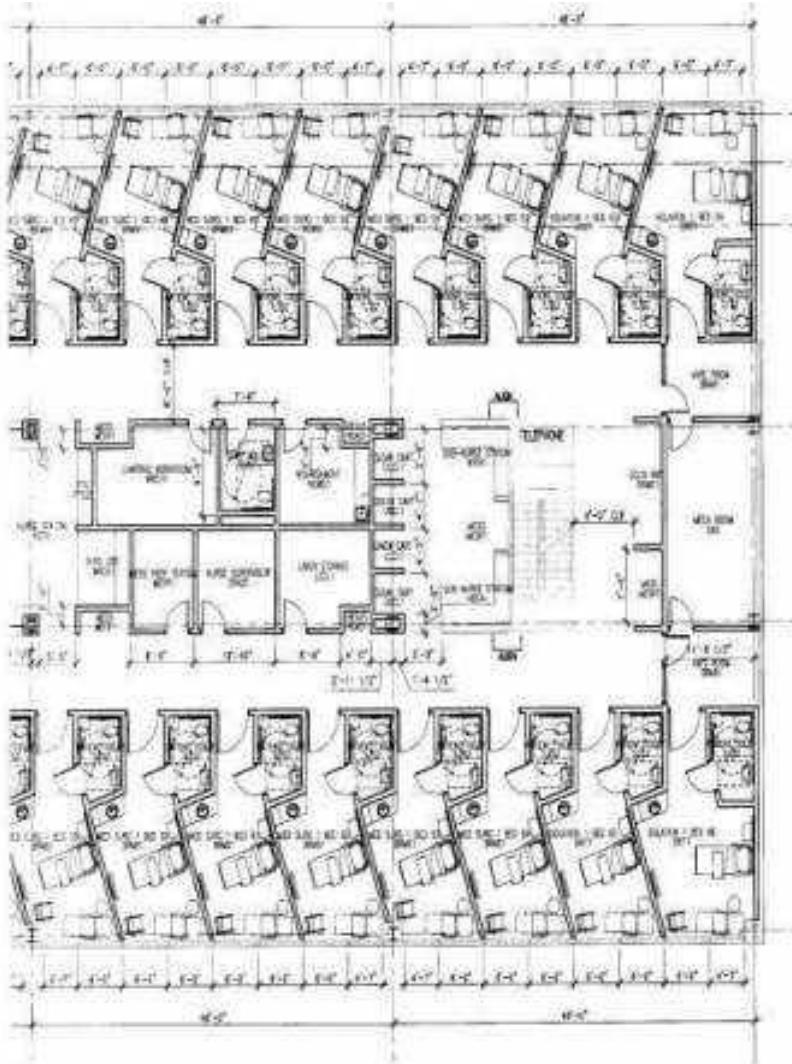
- Renovate all of 4<sup>th</sup> floor and 2/3 of 3<sup>rd</sup> Floor to Single Rooms (approx.100 beds= 65%)
- Rooms are small, dark, cramped family zone, handwashing issues
- But single rooms alone may save 10 lives a year- MAJOR SUCCESS
- 5<sup>th</sup> Floor (100 beds) and 7<sup>th</sup> floor Psych (28 beds) - still double rooms
- OLD BUILDING

# WARDS

# Belvoir: Flexible Unit Design for Staff Support



# Evidence-Based Design



**Definition:** Making decisions based on informed research which links the physical environment of hospitals to patient and staff outcomes..

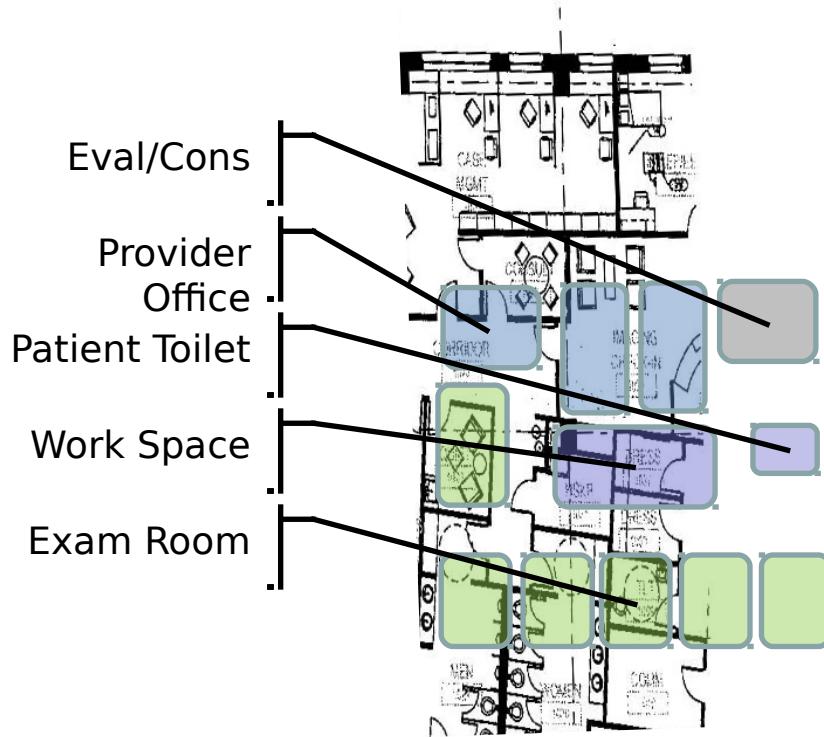


- **Increase Patient Safety**
- **Prevent Infection**
- **Minimize Stress**
- **Light Levels**
- **Pain Management**
- **Control for Patients and Family**

# WRNMMC: Inpatient Units

- ICUs: Positive: 100% outside air; spacious; semi-centralized nursing
- ICUs: Challenges: confusing, limited family logistics; noise issues
- BLDG 10 current: as seen
- BLDG 10 renovation: centralized nursing; light and noise issues; need family support units
- Potential for amelioration (7E unit)

# Outpatient Clinics



## Proposed Pod Configuration Criteria

- Each Pod consists of
  - (3) Provider Office
  - (6) Exam Rooms
  - (3) LPNs
  - (1) RN
  - (2) Clerks
- 13 pods requested\*

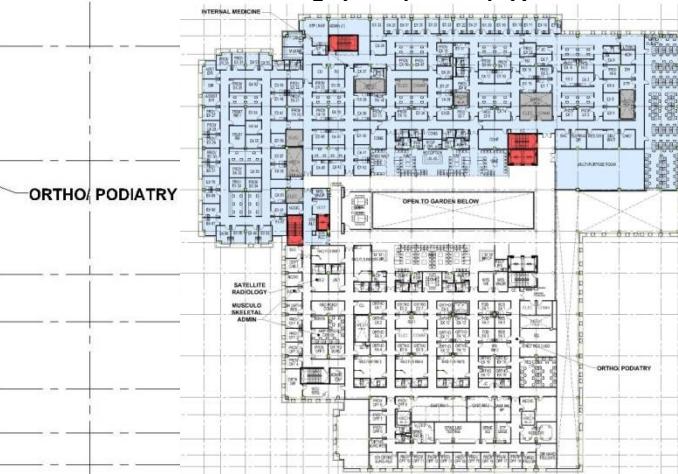
## Design Challenges and Assumptions

- Incorporation of Concept within Clinic Module
- Co-location of pods to share support spaces



# Design Features

- 12 pods accommodated
- No increase to DGSF
- No changes to Residents/ Research Admin Space
- Collaborative work spaces accommodated within clinic module

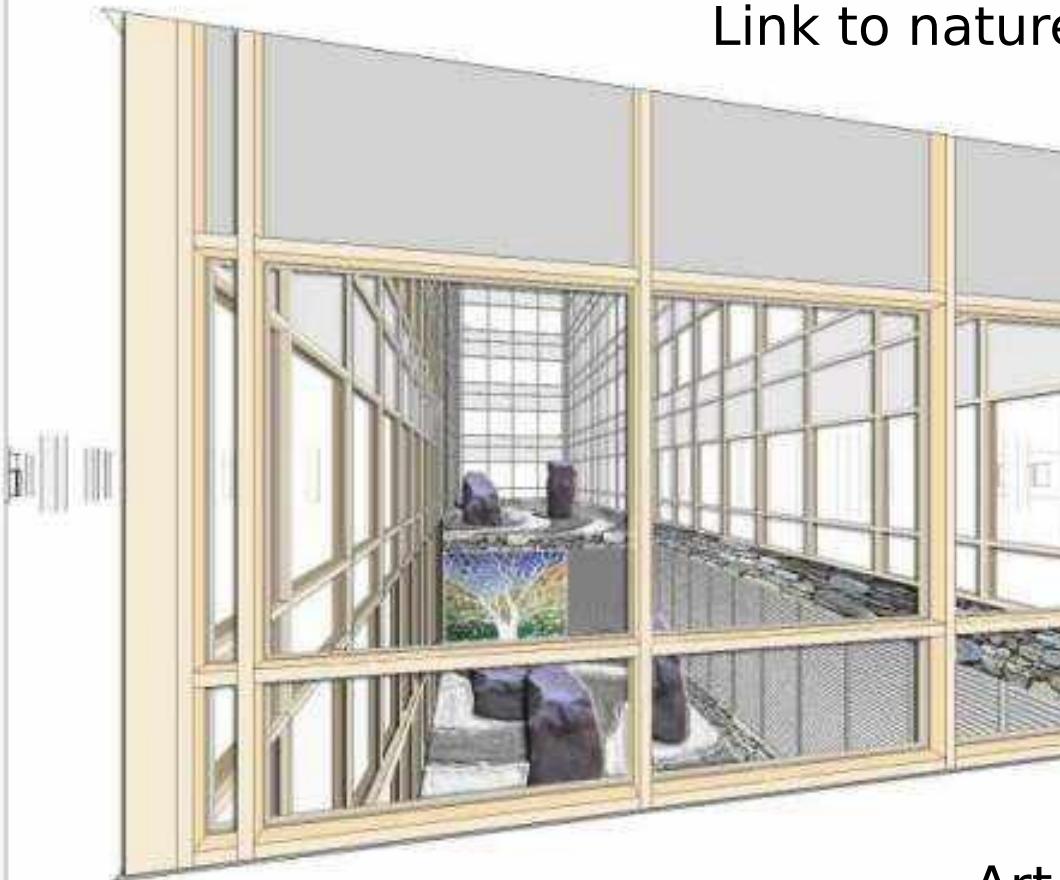


## **Key Plan of Department Boundary**

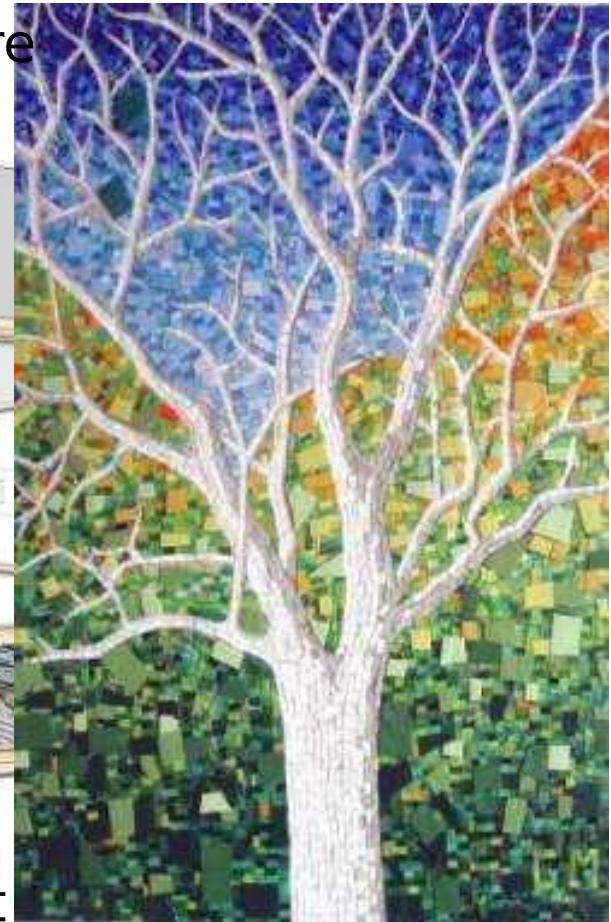
# Outpatient Areas

- COLOCATION of related services (“care centers”)
- Models of advanced care (Medical Home)
- LEEDS Silver, 100% outside air, energy efficient
- Problems:
  - SEPARATION from BLDG 9;
  - Relatively dark
  - Noise issues

# Light Well, Views and Garden



Link to nature



Art  
Beauty

# Public Areas

# Public Areas

- Lobbies: POTENTIAL for development
- Chapel
- Needs Pizzazz factor
- Hidden virtue: hundreds of tiny spaces
  - Transform into tiny spiritual spaces
  - Potential for healing arts program

# Gardens

# Healing Gardens and Green Roofs



# WRNMMC

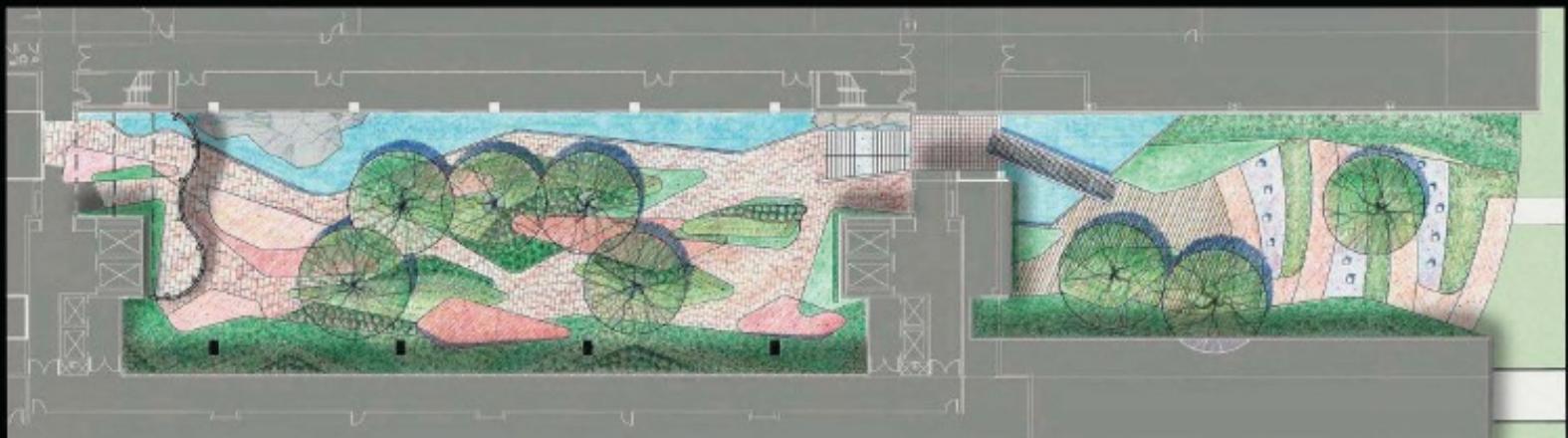


# Bethesda

National Military Medical Center | Bethesda, Maryland



SITE SECTION



SITE PLAN

# Bethesda

National Military Medical Center | Bethesda, Maryland



LANDSCAPE BERMS



GRAPHIC FEATURE WALL



WATER WALL

LIVING WALL SYSTEM



PERSPECTIVE OF MAIN GARDEN LOOKING WEST

# WRNMMC: The Campus

- Enormous potential for development
- Nature Nature Nature
- Walk and Imagine
- **Central Green Zone: “Green Valley”**

# WRNMMC: Patient experience

- Wayfinding
- Greeters- a positive
- Family support suites
- FOOD ISSUES- 24/7

# NICOE

- Clinical
- Education
- Research

Aerial view from Palmer Road South

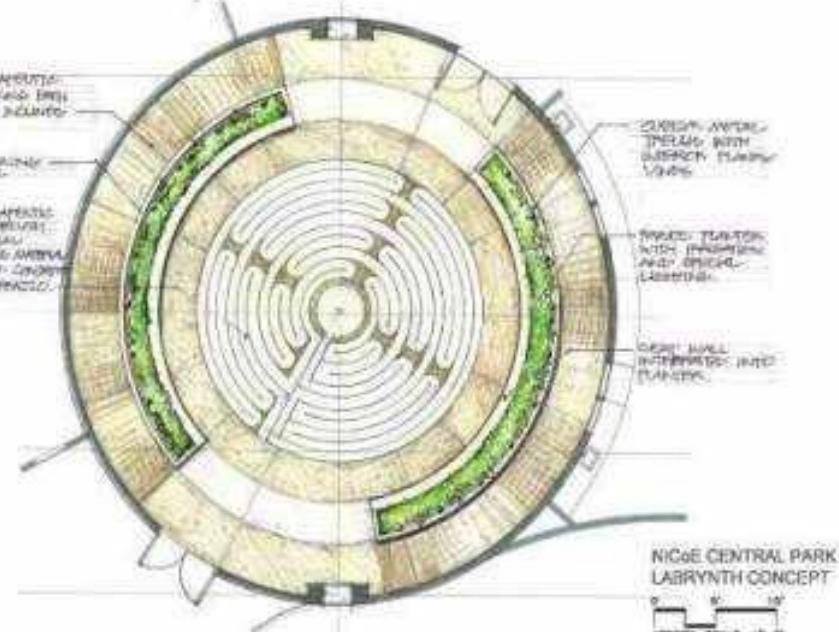
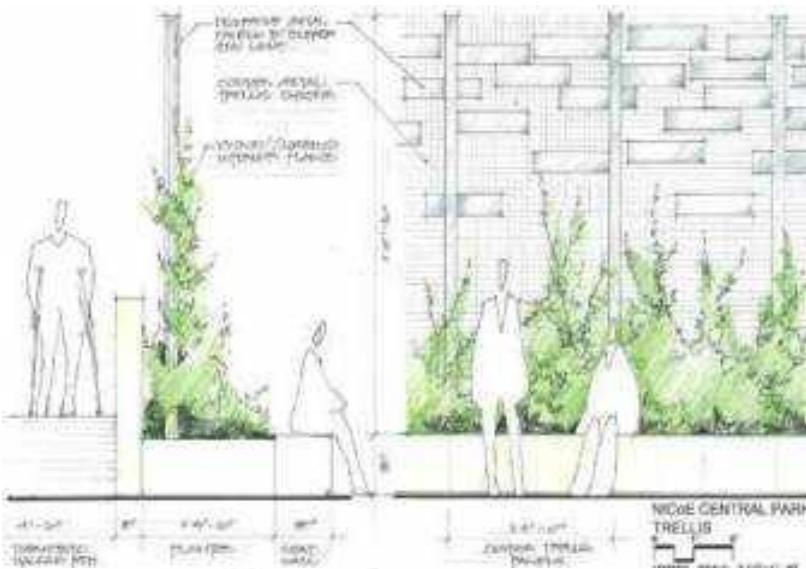


North-South section

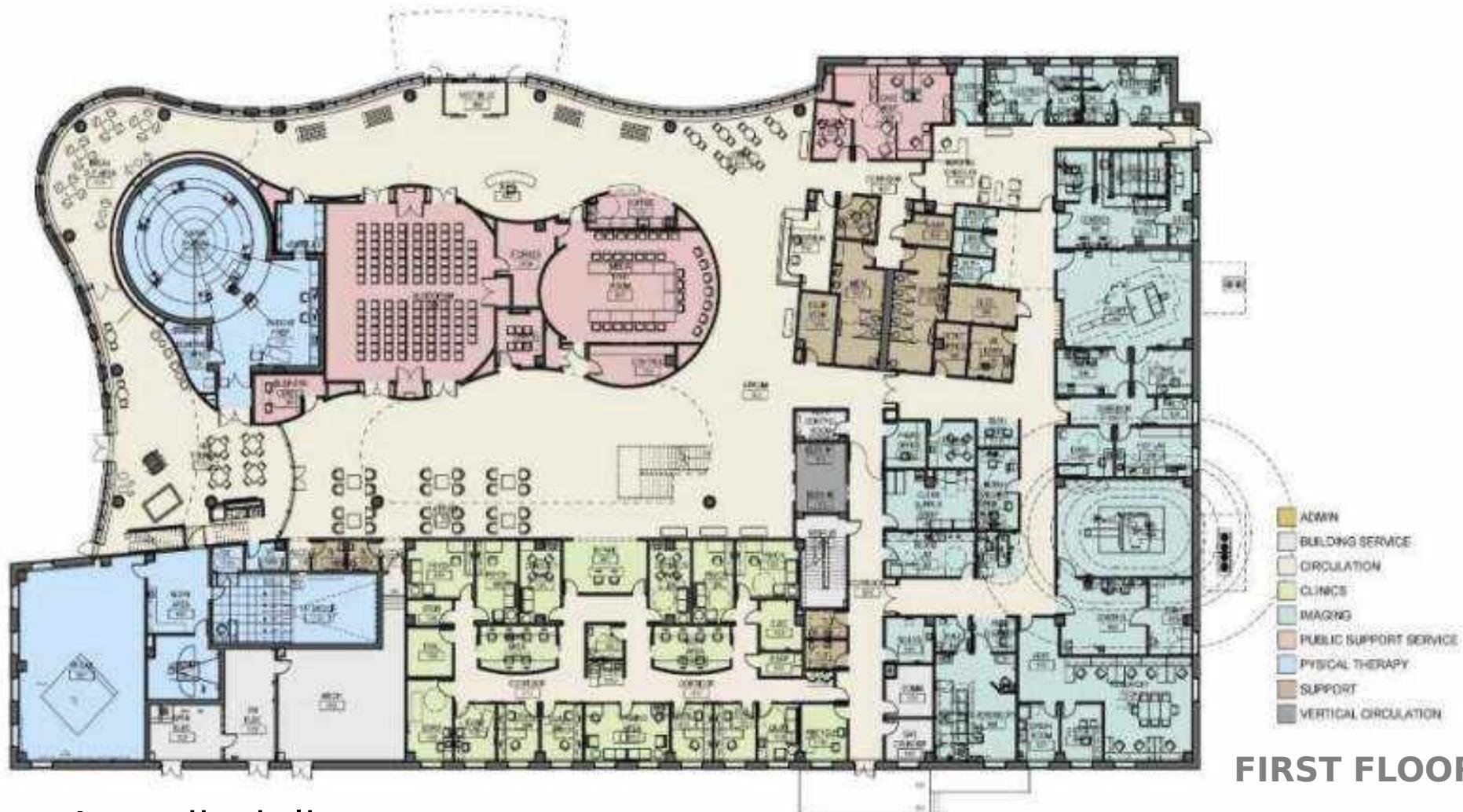


East-West section

# Gardens



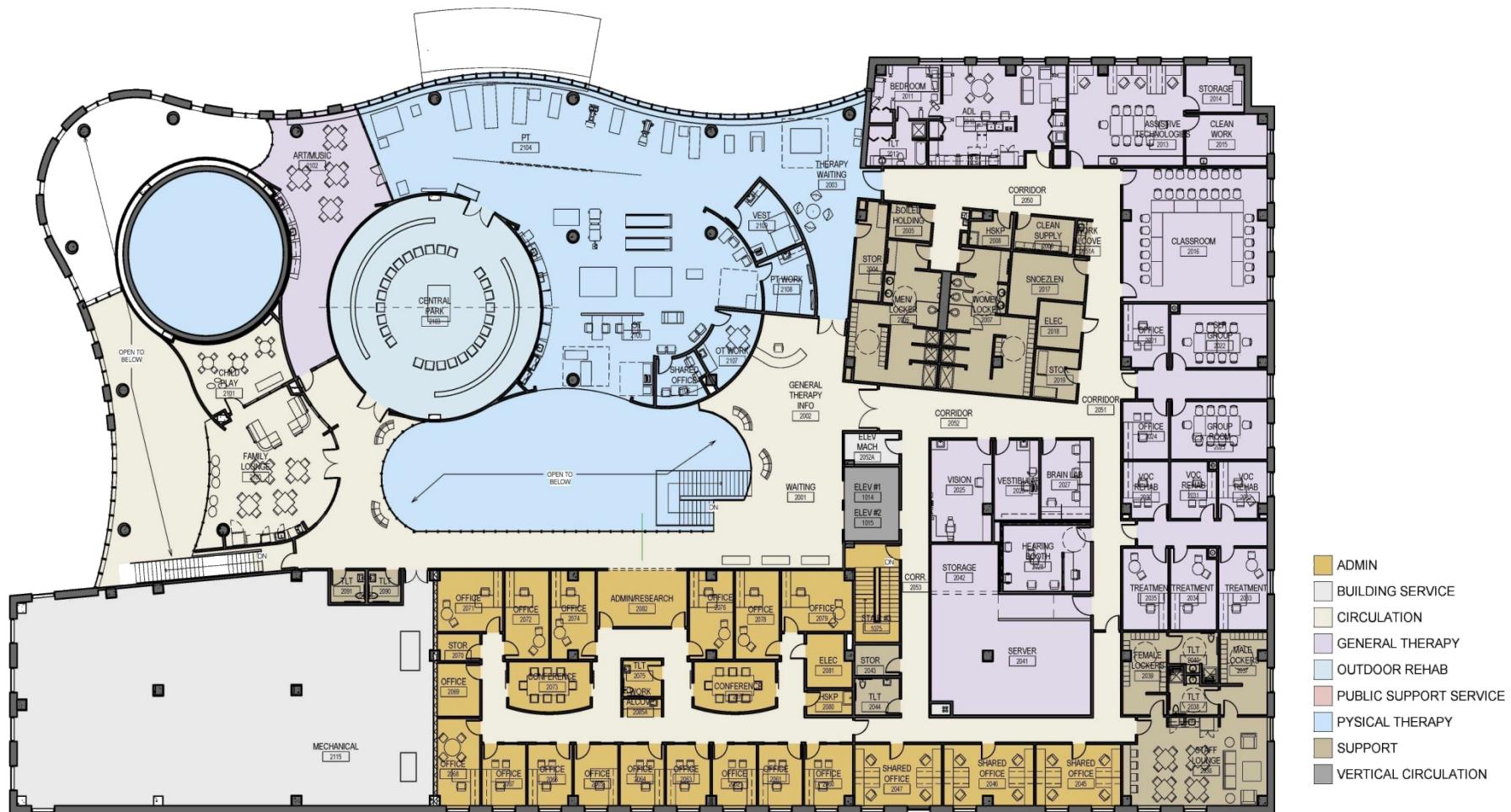
# First Floor



**FIRST FLOOR**

- Interdisciplinary Settings
- Total Health

# Second Floor



# WRNMMC: The Time Line

- Our projects need not be done by 2011
- Stand alone is easier than integrated
- Too late to redraw: BLDG A and B; renovated floors (but not decoration and finishes) of BLDG 10
- Pressed for time: “RFP-2 items” (Barracks, Gym, warrior housing, dining facility)

# Ambulatory Care Pavilion

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# WRNNMC- Glaring Needs

- BLDG 10: 5<sup>th</sup> Floor and 7<sup>th</sup> Floor Psych: renovate to Single Rooms (\$60 million)
- BLDG 9 and 10 Lobby renovations (\$9 million)
- Central green zone (“Green Valley”)
- Wayfinding scheme
  - Renovate interiors (?5 million)
  - Campus coherence (\$2.5 million)
- Moving walkways to connect separated outpatient buildings (\$4.5 million)

# WRNMMC – Glaring needs

- Large healing garden BLDGs 9-10 (\$15 million)
- Dismal lobbies and public areas (and no renovation money)
- Coherent garden plan (central green zone); garden MAINTAINANCE (\$10 million to endow)

# WRNMMC Campus: Missing Dreams

- **No hotel for troops to live with family (need 100 units) “Mologne House”**
- Recreation/Craft/ Warrior-Family Support Center (San Antonio: \$6 million)
- Develop the nature areas
  - Stream walk by Fisher houses
  - Woods near USUHS
- Wellness/CAM Center
- Stand alone Cancer Center with Hospice

# Epidaurus Project Scope of Work

The public spaces, on the ground level of the Medical Center that have not been included in the BRAC scope of work.

Identify and prioritize opportunities to enhance the overall healing environment for all patients, families, staff and visitors, within these spaces.

Engage cultural partners and seek out their creativity in the transformation of these areas.

Develop the vision, concepts and potential expertise to implement this plan.

Identify the philanthropic support necessary to fund the implementation of the plan.

Continue to enhance the overall healing environment of the Walter Reed National Military Medical Center.

# Epidaurus Project

## Current Areas of Focus

### **Wayfinding and the Patient/Family Experience**

- Historical artifacts from Walter Reed Army Medical Center
- Landmarks consistent with the themes of the Project
- Simplification of navigation between buildings



### **Healing Gardens**

- Creative re-development of the external built environment to create places of sanctuary, spirituality and comfort

# Next Steps for Oct. 2

- Refine Epidaurus Project values and scope of work
- Brainstorm Charette - All participants bring images of healing gardens, water features, art, etc.
- Refinement of the “Power Point Story”
- Discussion of agenda for November meeting
- Identification of individuals / firms capable of implementing the vision – development of scope of work and budgets
- Identification of potential partners and philanthropic support



# WRNMMC and Supporting Facilities

## RRP #1

- Awarded to Clark Balfour Beatty on 3/3/08
- New Outpatient Building and
- Inpatient Addition of ~637,000 SF
- Renovations of existing facilities of ~321,000 SF
- Two Parking Garages

## RFP #2

- Final RFP in Development
- BEQ, Dining and Warrior Transition Admin.
- New Administration Bldg
- Fitness Center and Parking Garage

# Construction Schedule

